

Received:
08 August 2015

Revised:
09 December 2015

Accepted:
10 December 2015

Cite this article as:

Ch'ng LS, Tazuddin EEM, Young B, Ali AFM. Spontaneous resolution of asymptomatic hepatic pseudoaneurysm post radiofrequency ablation. *BJR Case Rep* 2016; 2: 20150306.

CASE REPORT

Spontaneous resolution of asymptomatic hepatic pseudoaneurysm post radiofrequency ablation

¹LI SHYAN CH'NG, MRad (UM), FRCR (UK), ¹ESTRELLITA ELENA MOHD TAZUDDIN, MMed (USM),
²BENNY YOUNG, MMed (UKM) and ²AHMAD FAIZAL MOHD ALI, MMed (UKM)

¹Department of Radiology, Sarawak General Hospital, Kuching, Malaysia

²Department of Radiology, Universiti Malaysia Sarawak (UNIMAS), Kota Samarahan, Malaysia

Address correspondence to: Dr Li Shyan Ch'ng

E-mail: lishyanc@yahoo.com

ABSTRACT

Radiofrequency ablation (RFA) of a hepatic tumour is an established treatment option with an acceptable complication rate. Formation of a pseudoaneurysm after RFA of liver metastasis is an uncommon complication. We report the case of a 69-year-old female patient developing a hepatic pseudoaneurysm after RFA of liver metastasis. On a follow-up CT scan 6 weeks later, there was spontaneous resolution of the pseudoaneurysm. Hepatic pseudoaneurysms are usually treated owing to the risk of rupture. Invasive procedures or conservative management of an asymptomatic hepatic pseudoaneurysm is still the subject of debate. The spontaneous resolution of a hepatic pseudoaneurysm in our patient suggests that an asymptomatic pseudoaneurysm may be observed for resolution instead of being treated at presentation.

SUMMARY

Radiofrequency ablation (RFA) of a hepatic tumour is a safe procedure with an acceptable morbidity and a low mortality rate. Multicentre surveys show that mortality rates ranged from 0.1% to 0.5%. The major and minor complication rates ranged from 2.2% to 3.1% and 5% to 8.9%, respectively.¹ Formation of a pseudoaneurysm after RFA of liver metastasis is an uncommon complication. There have been prior reports of symptomatic cases being treated at presentation.^{2,3}

CASE REPORT

A 69-year-old female patient was diagnosed with advanced cervical carcinoma Stage IIb. She had undergone total abdominal hysterectomy and bilateral salpingo-oophorectomy, as well as completed 36 cycles of radiochemotherapy. A restaging CT scan showed a new solitary segment VIII liver metastasis measuring 3.1 (width) × 3.1 (AP) cm (Figure 1).

In view of the solitary liver metastasis, an RFA was performed. Using the right intercostal approach, an internally cooled 15-cm single electrode with a 3 cm active tip (Cool-tip™, Valleylab, Boulder, CO) was inserted into the tumour's epicentre under ultrasound guidance. No repositioning of the radiofrequency needle was carried out. Ablation was performed for approximately 12 min. No immediate complication was encountered and the patient was discharged the next day.

A CT scan of the abdomen in the portal venous phase was performed 6 weeks after the ablation. There was residual tumour circumferentially. An intensely enhancing area [measuring 2.3 cm (width) × 1.4 cm (AP)] was noted within the inferolateral aspect of the ablated lesion. The degree of enhancement of the lesion was similar to portal and hepatic veins (Figure 1). No demonstrable communication with the intrahepatic vessels was noted. Based on the CT scan findings, it was thought that the pseudoaneurysm likely originated from the portal or the hepatic vein. However, the single-contrast phase of the CT images made it difficult to identify the origin of the pseudoaneurysm. Extrahepatic disease progression was noted on follow-up CT scan, as evidenced by the enlarged para-aortic nodes and the peritoneal deposit at the splenic hilum. The patient was treated conservatively as she was asymptomatic and not keen on further intervention.

A CT scan of the abdomen 12 weeks after the ablation revealed progression of the segment VIII liver metastasis. The intensely enhancing area was no longer seen, indicating spontaneous resolution of the pseudoaneurysm. There was also progression of other intra-abdominal metastatic disease.

DISCUSSION

The clinical role of RFA is well established in the treatment of unresectable primary and metastatic hepatic tumours. RFA has been in use since the early 1990s. Complications associated with RFA are rare. The complications reported